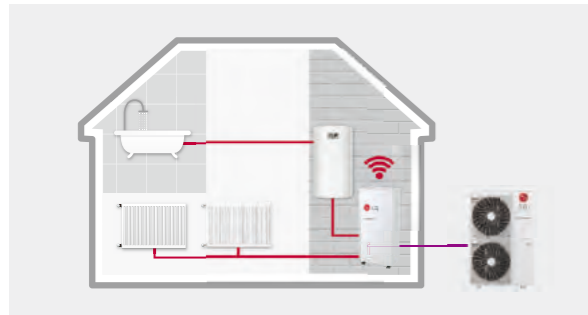
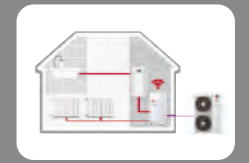


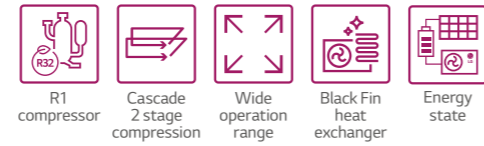


THERMAV™
FEATURES

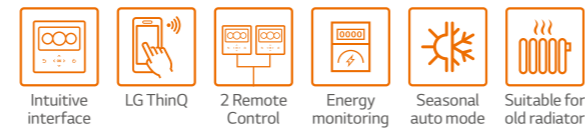
THERMA V™ HIGH TEMPERATURE



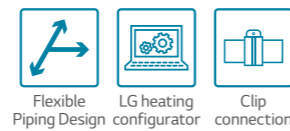
Excellent Performance & Efficiency



User Convenience

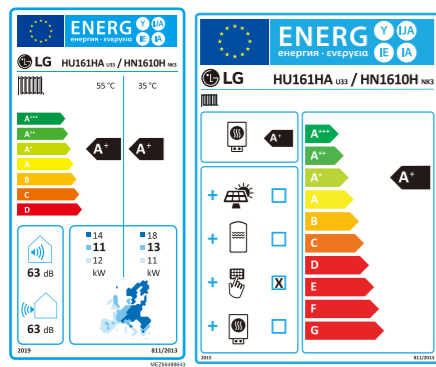


Easy Installation & Maintenance



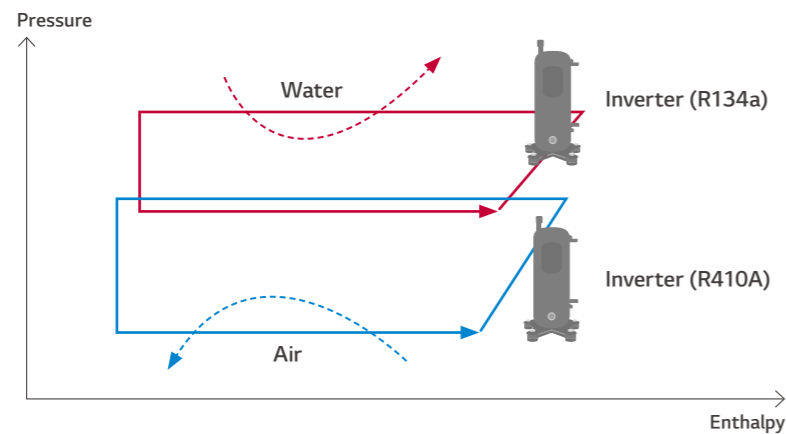
* Detailed description for each function is presented on page 28 - 33.

Energy Label



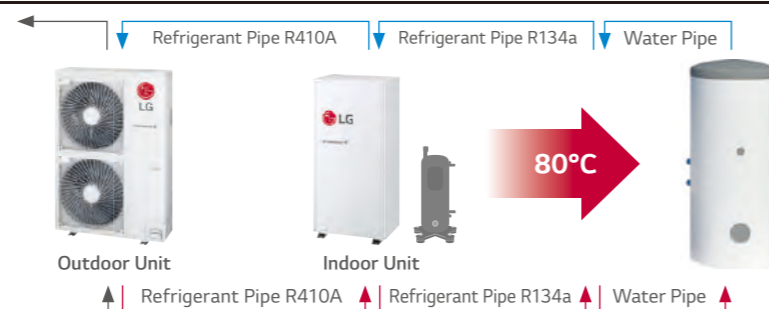
* 16kW 1Ø model.
* A+++ to D scale.

THERMA V High Temperature Cycle



High Temperature Introduction

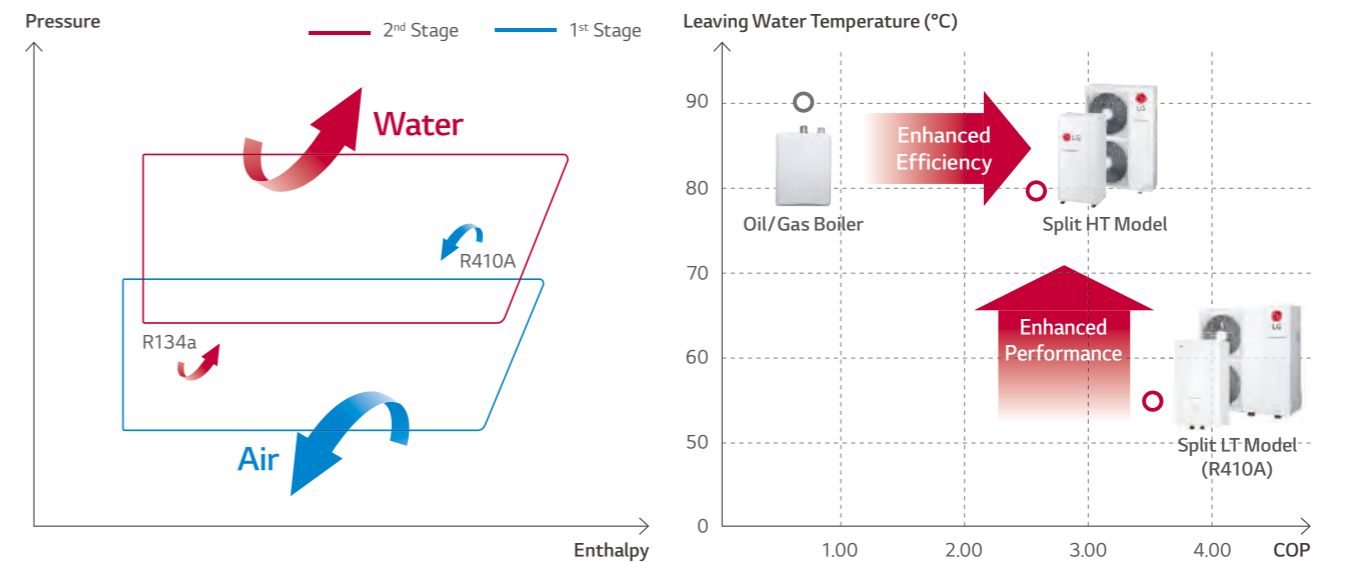
The LG THERMA V High Temperature is a split type unit that consists of a separate indoor and outdoor unit. With cascade 2 stage compression technology, it can supply a high leaving water temperature of up to 80°C, while maintaining high energy efficiency.



Cascade 2 Stage Compression Technology

The THERMA V High Temperature unit can produce up to 80°C hot water with high efficiency through cascade 2 stage compression (from R410A to R134a) technology, making it an optimized replacement for a boiler heating system which demands hot water supply.

High Temperature through Cascade Cycle Technology



* Condition for HT model : Outdoor air temp. 18°C, Entering water temp. 70°C
* Condition for LT model : Outdoor air temp. 18°C, Entering water temp. 55°C

Note
1. OAT : Outdoor Air Temperature, EWT : Entering Water Temperature, LWT : Leaving Water Temperature

Suitable for Old Radiator

The LG THERMA V High Temperature product is suitable for houses with poor insulation, an existing radiator heating system, or are required to meet sanitary water regulation needs at high temperatures.



PRODUCT SPECIFICATION

High Temperature

Indoor Unit

HN1610H NK3

Outdoor Unit

HU161HA U33



Features

- Maximum 80°C Leaving water temperature
- Cascade 2 stage compression
- Only for heating (no cooling)
- Suitable for old radiator
- SCOP up to 3.23 (Average climate / Low temp. application) : A+
- SCOP up to 3.01 (Average climate / Mid temp. application) : A+
- COP up to 3.27 (Outdoor air 7°C / Leaving water 35°C)
- 100% heating capacity at -7 °C OAT (@ LWT 35°C)
- Wide operation range (ambient : -25 ~ 35°C / water side : 25 ~ 80°C)
- R1 compressor (for outdoor unit)
- Black Fin heat exchanger
- LG ThinQ
- KEYMARK / MCS / EUROVENT certification

Model Line-up

Category	Unit	Model Name	
		Capacity (kW)	16.0
1 Phase Model 220 ~ 240V, 1Ø, 50Hz	Outdoor Unit	HU161HA U33	
	Indoor Unit	HN1610H NK3	

Seasonal Energy

Description	Outdoor Unit		HU161HA U33	
	Indoor Unit	HN1610H NK3		
Space Heating (according to EN14825)	Average Climate Water Outlet 35°C	SCOP	-	3.23
		Seasonal Space Heating Efficiency (η _s)	%	126
	Average Climate Water Outlet 55°C	Seasonal Space Heating Eff. Class (A+++ to D scale)	-	A+
		SCOP	-	3.01
	Seasonal Space Heating Efficiency (η _s)	%	117	
	Seasonal Space Heating Eff. Class (A+++ to D scale)	-	A+	

Nominal Capacity and Nominal Power Input

Description	OAT (DB)	LWT (DB)	Outdoor Unit		HU161HA U33	
			Indoor Unit	HN1610H NK3		
Nominal Capacity	Heating	7°C	35°C	kW	16.00	
		7°C	55°C		14.00	
		2°C	35°C		16.00	
Nominal Power Input	Heating	7°C	35°C	kW	4.89	
		7°C	55°C		5.00	
		2°C	35°C		4.92	
COP	Heating	7°C	35°C	W/W	3.27	
		7°C	55°C		2.78	
		2°C	35°C		3.25	

Product Specification (Outdoor Unit)

Technical Specification			Unit	HU161HA U33
Operation Range (outdoor temp.)	Heating	Min. ~ Max.	°C DB	-25 ~ 35
	Quantity		EA	1
Compressor	Type		-	Hermetic Sealed Scroll
	Type		-	R410A
Refrigerant	GWP (global warming potential)		-	2,088
	Precharged Amount		g	3,800
	t-CO ₂ eq		-	7,933
	Outside Diameter	Gas	mm (inch)	∅ 15.88 (5/8)
Piping Connections	Length	Liquid	mm (inch)	∅ 9.52 (3/8)
		Standard	m	7.5
	Level Difference	Max.	m	50
		Max.	m	30
	Chargeless-Pipe Length		m	7.5
	Additional Charging Volume		g/m	40
	Rated Water Flow Rate at LWT 35 °C		LPM	46.0
Sound Power Level	Heating	Rated	dB(A)	63
Sound Pressure Level (at 1m)	Heating	Rated	dB(A)	55
Dimensions	Unit	W x H x D	mm	950 x 1,380 x 330
Weight	Unit		kg	89.0
Exterior	Color / RAL Code		-	Warm Gray / RAL 7044
	Voltage, Phase, Frequency		V, ∅, Hz	220-240, 1, 50
Power Supply	Rated Running Current Heating		A	8.4
	Recommended Circuit Breaker		A	20
	Wiring Connections		Power Cable (included earth)	mm ² x cores

Product Specification (Indoor Unit)

Technical Specification			Unit	HN1610H NK3
Operation Range (leaving water temp.)	Heating	Min. ~ Max.	°C DB	25 ~ 80
	Quantity		EA	1
Compressor	Type		-	Hermetic Sealed Twin Rotary
	Type		-	R134a
Refrigerant	GWP (global warming potential)		-	1,430
	Precharged Amount		g	1,800
	t-CO ₂ eq		-	2,574
	Water Circuit	Inlet	Inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)
Outlet		Inch	Male PT 1" according to ISO 7-1 (tapered pipe threads)	
Piping Connections	Refrigerant Circuit	Gas (outside diameter)	mm (Inch)	∅15.88 (5/8)
		Liquid (outside diameter)	mm (Inch)	∅9.52 (3/8)
Rated Water Flow Rate (at LWT 35°C)			LPM	46.0
Sound Power Level	Heating	Rated	dB(A)	58 / 63 ¹⁾
Sound Pressure Level (at 1m)	Heating	Rated	dB(A)	50
Dimensions	Unit	W x H x D	mm	520 x 1,080 x 330
Weight	Unit		kg	84.0
Exterior	Color / RAL Code		-	Morning Gray / RAL 7030
	Voltage, Phase, Frequency		V, ∅, Hz	220 ~ 240, 1, 50
Power Supply	Rated Running Current Heating		A	9.8
	Recommended Circuit Breaker		A	25
	Wiring Connections		Power Cable (included earth)	mm ² x cores
		Communication Cable (included earth)	mm ² x cores	1.0 ~ 1.5 x 2C (VCTF-SB)
Accessory Kit of the Indoor Unit			Unit	HN1610H NK3
Remote Controller			-	Standard III (RS3)
Water Tank Temperature Sensor with Holder			Sensor Size	∅
			Resistance	kΩ
Strainer			Mesh Size / Material	-
				28 mesh / Stainless Steel

1) This sound power level (63dB(A)) is when AC cooling fan is operated.

Note

- Due to our policy of innovation some specifications may be changed without notification.
- Wiring cable size must comply with the applicable local and national codes. Especially the power cable and circuit breaker should be selected in accordance with that.
- Sound power level is measured on the rated condition in according with ISO 9614 standard. Sound pressure level is converted from sound power level based on tonality penalty of 0dB and installation in free-field. Therefore, these values can be increased owing to ambient conditions during operation. Rated sound power level is according to the EN12102-1 under conditions of the EN14825.
- This product contains Fluorinated greenhouse gases.

PRODUCT SPECIFICATION

Performance Table for Heating Operation

Maximum Heating Capacity (Including Defrost Effect)

HU161HA U33 + HN1610H NK3

Outdoor Temperature	LWT 35 °C	LWT 40 °C	LWT 45 °C	LWT 50 °C	LWT 55 °C	LWT 60 °C	LWT 65 °C	LWT 70 °C	LWT 75 °C	LWT 80 °C
	TC	TC	TC	TC	TC	TC	TC	TC	TC	TC
-25°C DB	13.50	13.29	13.07	12.86	12.64	12.43	12.21	12.00	-	-
-20°C DB	14.19	14.04	13.88	13.73	13.58	13.42	13.27	13.11	12.96	-
-15°C DB	14.89	14.79	14.70	14.60	14.51	14.41	14.32	14.22	14.10	14.00
-7°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
-4°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
-2°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
2°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
7°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
10°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
15°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
18°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
20°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
35°C DB	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00

Note

1. DB : Dry Bulb Temperature (°C), LWT : Leaving Water Temperature (°C), LPM : Liters Per Minute (ℓ/min), TC : Total Capacity (kW)
2. Direct interpolation is permissible. Do not extrapolate.
3. Measuring procedure follows EN-14511.
 - Rated values are based on standard conditions and it can be found on specifications.
 - Above table values may not be matched according to installation condition. Except for rated value, the performance is not guaranteed.
 - In accordance with the test standard (or nations), the rating will vary slightly.
4. The shaded areas are not guaranteed continuous operation.



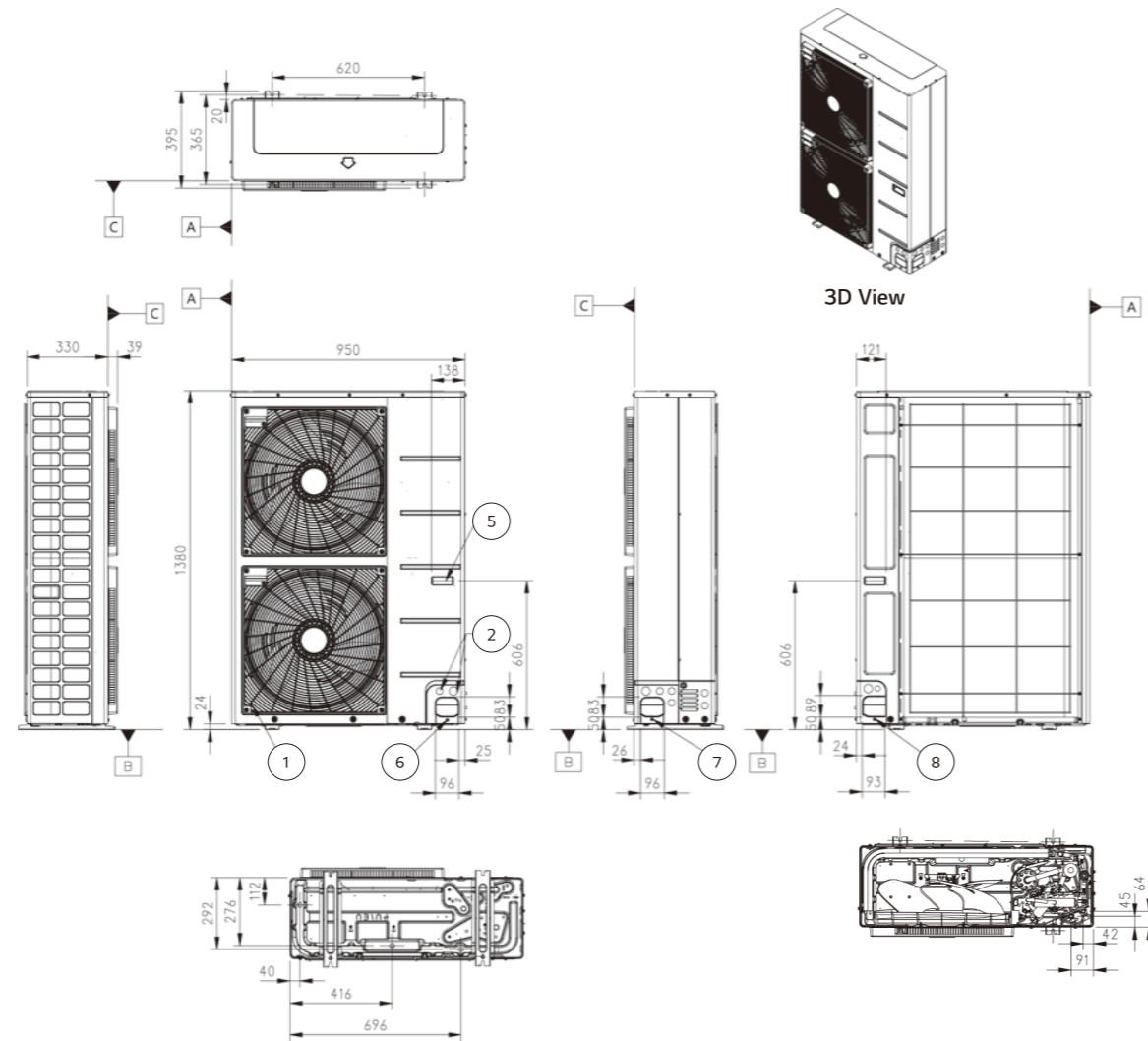
PRODUCT SPECIFICATION

Drawings

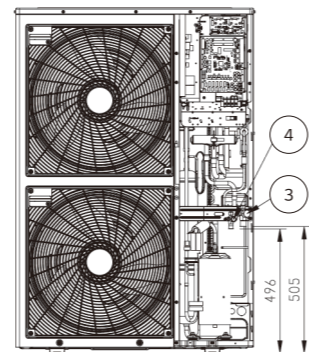
Category	Unit	Model Name
		Capacity (kW)
		16.0
1 Phase Model 220 - 240V, 1Ø, 50Hz	Outdoor Unit	HU161HA U33
	Indoor Unit	HN1610H NK3

HU161HA U33

[Unit : mm]

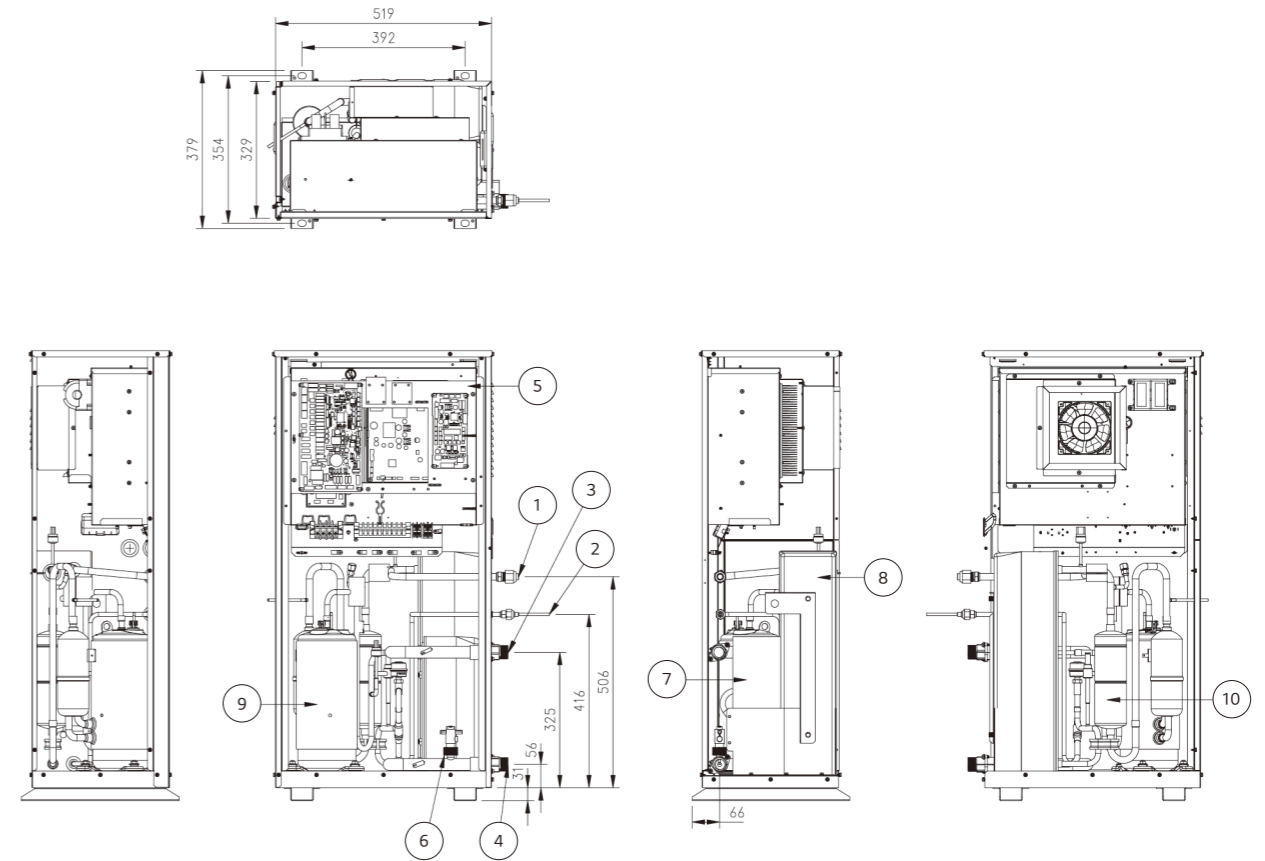


No.	Part Name	Description
1	Air Outlet	-
2	Power and Communication Cable Hole	-
3	Gas Pipe Connection	Flare joint
4	Liquid Pipe Connection	Flare joint
5	Handle	-
6	Pipe Routing Hole (front)	-
7	Pipe Routing Hole (side)	-
8	Pipe Routing Hole (back)	-



HN1610H NK3

[Unit : mm]



No.	Part Name	Description
1	Refrigerant Pipe (Liquid)	Ø9.52 (mm)
2	Refrigerant Pipe (Gas)	Ø15.88 (mm)
3	Leaving Water Pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
4	Entering Water Pipe	Male PT 1" according to ISO 7-1 (tapered pipe threads)
5	Control Box	PCB and terminal blocks
6	Flow Switch	Minimum operation range at 15LPM
7	Plate Heat Exchanger	Heat exchanger between refrigerant and water
8	Plate Heat Exchanger	Heat exchanger between refrigerant and refrigerant
9	Compressor	EPT525MBA
10	Accumulator	716 cc